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| 09/737,067 | 12/14/2000 | Daniel Murphy | P-5894 / SLD 2 0234 | 8258 |

24492 7590 12/03/2003

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| EXAMINER | |
|---|---|
| LEE, EDMUND H | |
| **ART UNIT** | **PAPER NUMBER** |
| 1732 | |

DATE MAILED: 12/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/737,067 | MURPHY, DANIEL | |
| | Examiner | Art Unit | |
| | EDMUND H. LEE | 1732 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *17 September 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-6* is/are allowed.

6)☒ Claim(s) *7-26* is/are rejected.

7)☒ Claim(s) *9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

## DETAILED ACTION

1. Claim 9 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Both base claim 7 and dependent claim 9 recite stepped configuration for the depressions. Claim 7 is not further limited by claim 9.

2. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 is indefinite because it gives the option of using a depression having a stepped configuration but base and independent claim 7 already limits the configuration as being stepped.

Correction is required. APPLICANT IS CAUTION AGIANST THE ADDITION OR CREATION OF NEW MATTER.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masutani (USPN 6213897) in view of Yamagishi et al (USPN 6508726) and Boehm et al (USPN 6103166). In regard to claim 7, Masutani teach the basic claimed process

including a method of making a golf ball (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2); molding a spherical center (col 3, ln 25-col 4, ln 5); providing a mold having a plurality of protrusion depressions on an inner surface of the mold wherein the depression have a width of from about 0.09 to about 0.18 inches and a depth of about 0.02 to about 0.06 inches (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2); positioning the center within the mold having the plurality of protrusion depressions (col 4, lns 45-50; col 5, lns 10-13, 30-37 and 55-67; col 6, lns 57-59; fig 2); molding a mantle layer about the center in the mold to form a center assembly having a plurality of outwardly extending protrusions (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2); and molding a cover about the mantle layer (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2). However, Masutani does not teach forming the plurality of protrusion depressions; and using the claimed design of the depressions, i.e., protrusion stepped depressions and stepped protrusions. In regard to forming the plurality of protrusions, Yamagishi et al teach forming a layer on a golf ball center (col 4, lns 34-43); forming protrusions on an inner cover layer by molding within a cavity having recesses on an inner surface thereof (col 4, lns 34-43); forming the recesses by a cutting method such as electrical discharge machining or numerical control machining (col 4, lns 34-43). Masutani and Yamagishi et al are combinable because they are analogous with respect to forming a layer of a golf ball having a plurality of protrusions thereon. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the protrusion depressions of Masutani by the cutting method of Yamagishi et al in order to effectively form

depressions in the mold of Masutani. In regard to using the claimed design of protrusions, i.e., protrusion stepped depressions and stepped protrusions, Masutani teaches using any shape of recesses and protrusions (col 5, lns 35-37). Boehm et al teach molding a golf ball having increased adhesion between layers of the golf ball (figs 1a-3b); and molding projections that have steps therein from projection stepped depressions in order to increase adhesion between layers of the golf ball (figs 1a-3b). Masutani and Boehm et al are combinable because they are analogous with respect to molding golf ball having increased adhesion between layers thereof. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the stepped projections and projections stepped depressions of Boehm et al for the projection and depression design of Masutani in order to increase adhesion of layers. In regard to claims 8-11, Masutani teaches using protrusion depressions selected from the group consisting of convex, angled, and stepped (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2); and molding a first cover layer about the mantle layer and molding a second cover layer about the first cover layer (col 4, lns 45-50; col 5, lns 10-13, 30-37 and 55-67; col 6, lns 57-59; fig 2). However, Masutani does not teach injection molding at the claimed specifications; and forming the protrusion stepped depressions by one of the claimed techniques. In regard to injection molding at the claimed specification, molding parameters such as temperature and duration are well-known in the molding art as important molding parameters and the desired temperature and duration would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention

was made. Further, the claimed temperature and duration are generally well-known in the molding art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to injection mold the mantle layer of Masutani at the claimed specifications in order to form a high quality golf ball. In regard to forming the stepped depressions by one of the claimed techniques, such was taught by the above combined teachings of Masutani and Yamagishi et al.

5. Claims 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masutani (USPN 6213897) in view of Yamagishi et al (USPN 6508726). In regard to claim 12, Masutani teach the basic claimed process including a method of making a golf ball (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2); providing a mold having a plurality of protrusion depressions on an inner surface of the mold wherein the depression have a depth of about 0.02 to about 0.06 inches (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2); producing a center assembly having a plurality of outwardly extending protrusions from the mold (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2); forming a mantle layer about the center assembly having the outwardly extending protrusions (col 4, lns 45-50; col 5, lns 10-13, 30-37 and 55-67; col 6, lns 57-59; fig 2); and producing a cover about the mantle layer to thereby obtain a golf ball (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2). However, Masutani does not teach forming the plurality of protrusion depressions. Yamagishi et al teach forming a layer on a golf ball center (col 4, lns 34-43); forming protrusions on an inner cover layer by molding within a cavity having recesses on an inner surface thereof (col 4, lns 34-43); forming the recesses by a

cutting method such as electrical discharge machining or numerical control machining (col 4, lns 34-43). Masutani and Yamagishi et al are combinable because they are analogous with respect to forming a layer of a golf ball having a plurality of protrusions thereon. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the protrusion depressions of Masutani by the cutting method of Yamagishi et al in order to effectively form depressions in the mold of Masutani. In regard to claims 13-16, Masutani teaches using two molds each defining a concave molding surface having a plurality of protrusion depressions on the molding surface (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2); using protrusion depressions selected from the group consisting of convex, angled, and stepped (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2); and forming a first inner cover layer about the mantle and forming an outer cover layer about the first inner cover layer (col 4, lns 45-50; col 5, lns 10-13, 30-37 and 55-67; col 6, lns 57-59; fig 2). However, Masutani does not teach compression molding at the claimed specifications; and forming the protrusion depressions by one of the claimed techniques. In regard to compression molding at the claimed specification, it is well-known in the golf ball molding art to compression mold a cover layer. Further, molding parameter such as temperature is well-known in the molding art as an important molding parameter and the desired temperature would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, the claimed temperature is generally well-known in the molding art and it would have been obvious to one of ordinary skill in the art at the

time the invention was made to compression mold the cover assembly of Masutani at the claimed specifications in order to form a high quality golf ball. In regard to forming the depressions by one of the claimed techniques, such was taught by the above combined teachings of Masutani and Yamagishi et al.

6. Claims 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masutani (USPN 6213897) in view of Yamagishi et al (USPN 6508726). In regard to claim 18, Masutani teach the basic claimed process including a method of making a golf ball (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2); molding a spherical center (col 3, ln 25-col 4, ln 5); providing a mold having a plurality of protrusion depressions on an inner surface of the mold wherein the depression have a width of from about 0.09 to about 0.18 inches (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2); positioning the center within the mold having the plurality of protrusion depressions (col 4, lns 45-50; col 5, lns 10-13, 30-37 and 55-67; col 6, lns 57-59; fig 2) ; molding mantle layer about the center to form a center assembly having a plurality of outwardly extending protrusions (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2); molding an intermediate layer about the center assembly having the outwardly extending protrusions (col 4, lns 45-50; col 5, lns 10-13, 30-37 and 55-67; col 6, lns 57-59; fig 2); and molding a cover about the intermediate layer to thereby obtain a golf ball (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2). However, Masutani does not teach forming the plurality of protrusion depressions. Yamagishi et al teach forming a layer on a golf ball center (col 4, lns 34-43); forming protrusions on an inner cover layer by molding within a cavity having recesses on an inner surface

thereof (col 4, lns 34-43); forming the recesses by a cutting method such as electrical discharge machining or numerical control machining (col 4, lns 34-43). Masutani and Yamagishi et al are combinable because they are analogous with respect to forming a layer of a golf ball having a plurality of protrusions thereon. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the protrusion depressions of Masutani by the cutting method of Yamagishi et al in order to effectively form depressions in the mold of Masutani. In regard to claims 19-23, Masutani teaches using two molds each defining a concave molding surface having a plurality of protrusion depressions on the molding surface (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2); using protrusion depressions selected from the group consisting of convex, angled, and stepped (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2); and molding a first cover layer about the intermediate layer and molding a second cover layer about the first cover layer (col 4, lns 45-50; col 5, lns 10-13, 30-37 and 55-67; col 6, lns 57-59; fig 2). However, Masutani does not teach compression molding at the claimed specifications; and forming the protrusion depressions by one of the claimed techniques. In regard to compression molding at the claimed specification, it is well-known in the golf ball molding art to compression mold a cover layer. Further, molding parameter such as temperature is well-known in the molding art as an important molding parameter and the desired temperature would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, the claimed temperature is generally well-known in the molding art and it would have been obvious

to one of ordinary skill in the art at the time the invention was made to compression mold the center assembly of Masutani at the claimed specifications in order to form a high quality golf ball. In regard to forming the depressions by one of the claimed techniques, such was taught by the above combined teachings of Masutani and Yamagishi et al.

7. Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masutani (USPN 6213897) in view of Yamagishi et al (USPN 6508726). In regard to claim 24, Masutani teach the basic claimed process including a method of making a golf ball (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2); providing a first die defining a first hemispherical molding surface (col 4, lns 45-50; col 5, lns 10-13, 30-37 and 55-67; col 6, lns 57-59; fig 2); providing a second die defining a second hemispherical molding surface, the second die adapted to engage with the first die such that the first molding surface and second molding surface align with each other to form a spherical molding surface adapted to form a golf ball component (col 4, lns 45-50; col 5, lns 10-13, 30-37 and 55-67; col 6, lns 57-59; fig 2); providing a mold having a plurality of protrusion convex depressions on an inner surface of the mold wherein the depressions have a width of from about 0.09 to about 0.18 inches and a depth of about 0.02 to about 0.06 inches (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2); positioning the first and second dies together to form a generally spherical molding cavity defining the plurality of protrusion convex depressions therein (col 4, lns 45-50; col 5, lns 10-13, 30-37 and 55-67; col 6, lns 57-59; fig 2); molding a center assembly in the molding cavity (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns

57-59; fig 2); and forming a cover about the center assembly to thereby obtain a golf ball (col 4, lns 45-50; col 5, lns 30-37 and 55-67; col 6, lns 57-59; fig 2). However, Masutani does not teach machining the plurality of protrusion convex depressions. Yamagishi et al teach forming a layer on a golf ball center (col 4, lns 34-43); forming protrusions on an inner cover layer by molding within a cavity having recesses on an inner surface thereof (col 4, lns 34-43); forming the recesses by a cutting method such as electrical discharge machining or numerical control machining (col 4, lns 34-43). Masutani and Yamagishi et al are combinable because they are analogous with respect to forming a layer of a golf ball having a plurality of protrusions thereon. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to machine the protrusion depressions of Masutani by the cutting method of Yamagishi et al in order to effectively form depressions in the mold of Masutani. In regard to claim 25, it is well-known in the golf ball molding art to compression mold a cover layer. Further, molding parameters such as temperature and pressure are well-known in the molding art as important molding parameters and the desired temperature and pressure would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, the claimed temperature and pressure are generally well-known in the molding art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to compression mold the center assembly of Masutani at the claimed specifications in order to form a high quality golf ball. In regard to claim 26, Masutani teaches injection molding (col 4, lns 45-50; col 5, lns 10-13, 30-37 and 55-67; col 6, lns

57-59; fig 2). Molding parameters such as temperature and duration are well-known in the molding art as important molding parameters and the desired temperature and duration would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, the claimed temperature and duration are generally well-known in the molding art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to injection mold the center assembly of Masutani at the claimed specifications in order to form a high quality golf ball.

8. Claims 1-6 are allowed.

9. Applicant's arguments filed 9/17/03 have been fully considered but they are not persuasive. In regard to claims 7-11, Applicant's arguments are moot in view of the above 35 USC 103 rejection. The use of the stepped depressions and protrusions of Boehm et al in place of the depressions and protrusions of Masutani is obvious since they both increase the adhesion of the layers of the golf ball. They are substitutable alternatives. In regard to claims 12-17, Applicant argues neither Masutani nor Yamagishi et al teach forming a mantle layer on the center assembly. This argument is misplaced because Masutani teaches molding two layers on the protrusions wherein the layers are called cover layers (col 3, lns 19-20). The inner layer of the two layer cover system constitutes a mantle layer. Unless specifically defined, a mantle layer is any inner layer within a multi-layered golf ball. In regard to claims 18-23, Applicant argues neither Masutani nor Yamagishi et al teach molding a spherical center, molding a mantle layer about the center such that the mantle layer has a plurality of outwardly

extending protrusions, molding an intermediate layer about the mantle having the protrusions, and molding a cover about the intermediate layer. This argument is misplaced because the intermediate layer of Masutani constitutes the claimed mantle layer, and the inner layer of the two-layer cover system of Masutani constitutes the claimed intermediate layer. Unless specifically defined, a mantle layer is any inner layer within a multi-layered golf ball. Unless specifically defined, an intermediate layer is any inner layer within a multi-layered golf ball. In regard to claims 24-26, Applicant argues neither Masutani nor Yamagishi et al teach protrusion convex depressions because there are no arcuate or curved walls. This argument is misplaced because convex is not limited to an arcuate or curved shaped. The term convex has a generic meaning of arched out or bulged out. Therefore, Masutani teaches protrusion convex depressions. It should be mentioned that curved protrusions are well-known in the golf ball art. For example, Hwang (USPN 5820485) who uses curved protrusions to increase adhesion between the layers of the multi-layered golf ball.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDMUND H. LEE whose telephone number is 703.305.4019. The examiner can normally be reached on MONDAY-THURSDAY FROM 9AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 703.305.5493. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.0661.

EDMUND H. LEE
Primary Examiner
Art Unit 1732
12/1/03

EHL